

ABSTRACT OF THE DISCLOSURE

Appropriate shadowing processing is performed even if coordinate conversion calculation values of polygons have errors. A calculation section 5 performs hidden surface removal processing on normal polygons based on visual-point coordinates and depth values from a visual-point coordinate conversion processing unit 1, and updates a pixel memory 6 and a Z-buffer memory 7. Further, based on a comparison result of obtained depth values of each polygon and Z values stored in the Z-buffer memory 7, shadowing is performed only on a coordinate region positioned in front of back-facing shadow polygons and behind front-facing shadow polygons when seen from a visual point, and the pixel memory 6 is updated. As a result, even if coordinate conversion calculation values in graphic data on polygons have errors, an edge portion of the shadow polygons which is not intended to be shadowed is not shadowed.